

**M.Sc.**

**2016**

**4th Semester Examination**

**BIOMEDICAL LABORATORY SCIENCE AND MANAGEMENT**

**PAPER—BLM-401**

*Full Marks : 40*

*Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

*Q. No.1 and any three from the rest.*

1. Answer any ten questions of the following : 10×1

Choose the right one :

(a) Orthostatic Proteinuria is found in

- (i) older people with excessive standing posture.
- (ii) young people with standing posture.
- (iii) Children with excessive standing posture.
- (iv) None of the above.

*(Turn Over)*

- (b) Nocturia resimble excretion of urinate might by an adult of :
- (i) > 600ml with a specific gravity < 1.010 ;
  - (ii) < 500ml with a specific gravity < 1.010 ;
  - (iii) > 600ml with a specific gravity < 1.018 ;
  - (iv) > 500ml with a specific gravity < 1.018 ;
- (c) Brownish black urine is consequence of :
- (i) Homogentisic acid ;
  - (ii) Riboflavin ;
  - (iii) Acidified blood ;
  - (iv) Phenylketonuria.
- (d) Most common cast in urine :
- (i) Fatty Cast ;
  - (ii) Waxy cast ;
  - (iii) Hyaline Cast ;
  - (iv) Granular cast.
- (e) Exualates are more often :
- (i) Unilateral associated with increase vascular permeability ;
  - (ii) Bilateral associated with increased capillary pressure ;
  - (iii) Bilateral associated with decreased capillary pressure.

- (iv) None of the above.
- (f) Arsenic from urinal is removed through
- (i) S-adenosine methionine pool ;
  - (ii) S-adenosyl homocysteine pool ;
  - (iii) S-adenosyl methionine pool ;
  - (iv) None of the above.
- (g) The tests involved in the detection of total ketone body profile :
- (i) Nitroprusside test and enzymatic test ;
  - (ii) Nitroprusside test ;
  - (iii) Enzymatic test ;
  - (iv) None of the above.
- (h) Coliform bacilli produce— Substances that destroy enteric pathogen :
- (i) Protein B ;
  - (ii) Lyase ;
  - (iii) Ligase ;
  - (iv) Antibiotic.
- (i) Diarrhoea mixed with mucus and white blood cells is associated with :
- (i) Ulcerative Colitis and Typhoid ;
  - (ii) Ulcerative Colitis and Typhus ;
  - (iii) Ulcerative Colitis and Shigellous ;
  - (iv) Ulcerative Colitis and amoebiasis.

- (j) Waxy cast found in :
- (i) Long standing kidney disease ;
  - (ii) Cystitis ;
  - (iii) Acute pyelonephritis ;
  - (iv) Chronic cystitis.
- (k) Serous fluid can accumulate in :
- (i) Pleural space ;
  - (ii) Peritoneal cavity ;
  - (iii) Both ;
  - (iv) None.
- (l) Crystal formation in synovial space may occur due to
- (i) MSU ;
  - (ii) Corticosterone ;
  - (iii) Both ;
  - (iv) None.
- (m) White precipitate of amorphous phosphate is found in
- (i) Normal urine ;
  - (ii) Ketonuria ;
  - (iii) Haematuria ;
  - (iv) all of the above.
- (n) Defectable clinical signs in patient is found in pleural effusion when
- (i) > 400 ml fluid accumulated ;
  - (ii) > 300 ml fluid accumulated ;
  - (iii) < 200 ml fluid accumulated ;
  - (iv) None.

- (o) Steatorrhoea is a condition when
- (i) Fat digestion is reduce due to reduced lipase activity ;
  - (ii) Disturbance in bile secretetion ;
  - (iii) Disturbance in fat metabolism ;
  - (iv) all of the above.
2. (a) Signify the different colour and odour of urine.
- (b) How do you perform preconditioning the patient for 24 hr. urine collection.
- (c) How do you collect urine samples from older people who do not micturate normally?  $(2\frac{1}{2}+2\frac{1}{2})+3+2$
3. (a) State the mechanism how harmonic oscillation technique helps in the measurement of Specific gravity.
- (b) What do you mean by doping agents ?
- (c) How do you collect urine for dope test?  $3+3+4$
4. (a) State different types of crystals found in urine of different state with their clinical significance and also draw the diagram of the crystals.

- (b) Describe the method for the detection of arsenic in urine with diagrammatic representation. 5+5
5. (a) Discuss how fecal consistency and odour changes with different clinical condition.
- (b) State the significance of excessive mucous in stool.
- (c) State the different interfering factors that alter the results of stool examination.
- (d) What is the significance of porphyrins in stool. 3+3+2+2
6. (a) What is the impact of interferon- $\gamma$  in pleural fluid?
- (b) Discuss about chylous effusion.
- (c) State the characteristic features of Synovial fluid.
- (d) Describe arthrocentesis and Ropes test. 2+2+2+4
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